CLAIMS

1. An anti-fouling composition comprising

(i) a surface coating material;

(ii) an enzyme obtained or obtainable from a marine organism; and

(iii) (a) a substrate for the enzyme; and/or

(b) a precursor enzyme and a precursor substrate, wherein the precursor enzyme and the precursor substrate are selected such that a substrate for the enzyme is generatable by action of the precursor enzyme on the precursor substrate;

wherein the enzyme and the substrate are selected such that an anti-foulant compound is generatable by action of the enzyme on the substrate.

2. A composition according to claim 1 wherein the enzyme is obtained or is obtainable from a marine alga.

3. A composition according to claim 1 wherein the enzyme is obtained or is obtainable from *Chondrus cripus*.

4. A composition according to claim 1 wherein the enzyme is hexose oxidase.

5. A composition according to claim 4 wherein the hexose oxidase enzyme comprises the amino acid sequence set out in SEQ ID No 2 or a variant, homologue, derivative or fragment thereof.

6. A composition according to claim 1 wherein the substrate is a sugar.

7. A composition according to claim 6 wherein the sugar is glucose.

8. A composition according to claim 1 wherein the composition comprises a

precursor enzyme and a precursor substrate, wherein the precursor enzyme and the precursor substrate are selected such that the precursor substrate generates a substrate for the enzyme by action of the precursor enzyme on the precursor substrate.

9. A composition according to claim 8 wherein the precursor enzyme is amyloglucosidase.

10. A composition according to claim 8 wherein the precursor substrate is starch.

11. A composition according to claim 1 wherein the composition further comprises a binder to immobilise at least one of the constituents of the composition, preferably to immobilise the enzyme.

12. A coating consisting of a composition according to claim 1.

13. A coating according to claim 12 formulated for treatment of a surface selected from outdoor wood work, external surface of a central heating system, and a hull of a marine vessel.

14 A marine anti-foul consisting of a composition according to claim 1.

15. A marine anti-foul according to claim 14 wherein the anti-foulant is self-polishable.

16. A method for releasing an anti-fouling compound from a surface coating, which method comprises incorporating in a surface coating

(i) an enzyme obtained or obtainable from a marine organism; and

(ii) (a) a substrate for the enzyme; and/or

(b) a precursor enzyme and a precursor substrate, wherein a substrate for the enzyme is generated by action of the precursor enzyme on the precursor

substrate;

wherein the anti-fouling compound is generated by action of the enzyme on the substrate.

17. A composition as substantially hereinbefore described with reference to the Examples.

18. A coating as substantially hereinbefore described with reference to the Examples.

19. A marine anti-foul as substantially hereinbefore described with reference to the Examples.

20. A method as substantially hereinbefore described with reference to the Examples.

21. An anti-fouling composition comprising:

(i) a surface coating material;

(ii) an enzyme obtained or obtainable from a marine organism; and

(iii) a substrate for the enzyme;

wherein the enzyme is hexose oxidase, and the substrate is sugar, such that an anti-foulant compound is generated by action of the enzyme on the substrate.

22. An anti-fouling composition comprising:

(i) a surface coating material;

(ii) an enzyme obtained or obtainable from a marine organism; and

(iii) a substrate for the enzyme;

wherein the enzyme is hexose oxidase having the amino acid sequence set forth in SEQ ID NO: 2, and the substrate is sugar, such that an anti-foulant compound is generated by action of the enzyme on the substrate.

23. An anti-fouling composition comprising:

(i) a surface coating material;

(ii) an enzyme obtained or obtainable from *Chondrus cripus*; and

(iii) a substrate for the enzyme;

wherein the enzyme is hexose oxidase, and the substrate is sugar, such that an anti-foulant compound is generated by action of the enzyme on the substrate.

24. An anti-fouling composition comprising:

(i) a surface coating material;

(ii) an enzyme obtained or obtainable from *Chondrus cripus*; and

(iii) a substrate for the enzyme;

wherein the enzyme is hexose oxidase having the amino acid sequence set forth in SEQ ID NO: 2, and the substrate is sugar, such that an anti-foulant compound is generated by action of the enzyme on the substrate.

25. An anti-fouling composition comprising:

(i) a surface coating material;

(ii) an enzyme obtained or obtainable from a marine organism; and

(iii) a substrate for the enzyme;

wherein the enzyme is hexose oxidase, and the substrate is glucose, such that an anti-foulant compound is generated by action of the enzyme on the substrate.

26. An anti-fouling composition comprising:

(i) a surface coating material;

(ii) an enzyme obtained or obtainable from a marine organism; and

(iii) a substrate for the enzyme;

wherein the enzyme is hexose oxidase having the amino acid sequence set forth in SEQ ID NO: 2, and the substrate is glucose, such that an anti-foulant compound is generated by action of the enzyme on the substrate.

27. An anti-fouling composition comprising:

(i) a surface coating material;

(ii) an enzyme obtained or obtainable from *Chondrus cripus*; and

(iii) a substrate for the enzyme;

wherein the enzyme is hexose oxidase, and the substrate is glucose, such that an anti-foulant compound is generated by action of the enzyme on the substrate.

28. An anti-fouling composition comprising:

(i) a surface coating material;

(ii) an enzyme obtained or obtainable from *Chondrus cripus*; and

(iii) a substrate for the enzyme;

wherein the enzyme is hexose oxidase having the amino acid sequence set forth in SEQ ID NO: 2, and the substrate is glucose, such that an anti-foulant compound is generated by action of the enzyme on the substrate.

29. A composition according to claim 4 wherein the hexose oxidase enzyme comprises the amino acid sequence set out in SEQ ID NO:2.